

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

HR1SO Revision 11 Orlando Helicopter Airways, Inc.	
HRS-1/CH-19	H-19D
H-19A	H-19G
YH-19A	UH-19F
UH-19C	CH-19E
HRS-3/H-19B	UH-19D
August 13, 2003	

TYPE CERTIFICATE DATA SHEET NO. HR1SO

This data sheet, which is part of Type Certificate No. HR1SO, prescribes conditions and limitations under which the product for which the type certificate was issued, meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Orlando Helicopter Airways, Inc.
1380 Flightline Blvd.
Deland Airport
Deland, FL 32723

I. - Model HRS-1/CH-19 (Restricted Category Military Surplus) approved April 8, 1966

II. - Model H-19A, YH-19A, UH-19C (Restricted Category Military Surplus) approved November 3, 1970

Engine: Pratt and Whitney R-1340-57
(See Note 8 regarding helicopter, engines and appliances)

Fuel: 91/96 minimum grade aviation gasoline (See note 11 for alternate fuels)

Engine Limits: Maximum Continuous
(Sea level) 35.0 in. Hg., 2250 rpm (550 hp)
(Straight line manifold pressure variation with altitude to 8000 ft.)
33.0 in. Hg. 2200 rpm (550 hp)
Take-off (one minute) 36.5 in. Hg., 2250 rpm (600 hp)

Rotor Speed Limits: Maximum 245 rpm
Normal Operating Range 185 rpm to 220 rpm, Minimum 170 rpm

Airspeed limits: Vne (never exceed) 95 knots (See NOTE 2 for required placard)

Other Limits: T.O. AN 01-230HJA-1 and Orlando Helicopter Airways FAA approved Flight Manual Supplement dated April 8, 1966.

The helicopters approved under this type certificate are done so under the concept of limited exposure associated with escape from inadvertent ice encounters, and are prohibited against flight into known icing. The helicopters must be re-evaluated if certification to the General Ice protection Airworthiness Regulations is requested.

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Center of Gravity (C.G.) Range:	(125.0) to (136.0)
Empty Weight (C.G.) Range:	Refer to Operators Manual USAF Model HRS-1/CH-19, H-19A, YH-19A, UH-19C Helicopters.
Datum:	130.6 in. forward of center of main rotor hub.
Leveling Means:	Plumb line from top of cabin doorframe to index plate on cabin floor. (See Note 1.)
Maximum Weight:	7200 lbs.
Minimum Crew:	1 (Pilot)
Number of Seats:	See Note 11
Fuel Capacity:	100 gallons forward tank, 72 gallons rear tank.
Oil Capacity:	9.4 gallons
Rotor Blade and Control Movement:	For rigging information, refer to Maintenance Manual USAF Model HRS-1/CH-19, H-19A, YH-19A, UH-19C Helicopters.
Serial No's. Approved:	Model HRS-1/CH-19, H-19A, YH-19A, UH-19C helicopters that have been approved are identified in FAA approved Orlando Helicopter Airways, Inc., Eligible Serial Number Report # 01-3551, dated October 21, 2001 or later FAA approved revision. Current copy is available at the Atlanta Aircraft Certification Office, Atlanta, Georgia.

III. - Model HRS-3/H-19B, H-19D, H-19G, (Restricted Category Military Surplus) approved January 23, 1967

IV. - Model UH-19F, CH-19E (Restricted Category Military Surplus) approved November 3, 1970

V. - Model UH-19D (Restricted Category Military Surplus) approved October 17, 1978

Engine:	Wright R 1300-3 series (See Note 8 regarding helicopter, engines and appliances)
Fuel:	91/96 minimum grade aviation gasoline (See note 11 for alternate fuels)
Engine Limits:	Maximum Continuous (all operations) (Sea level) 39.5 in. Hg., 2400 rpm (700 hp) (Straight line manifold pressure variation with altitude to 5000 ft.) 38.0 in. Hg. 2400 rpm (700 hp)
Rotor Speed Limits:	Maximum 245 rpm Normal Operating Range 185 rpm to 220 rpm, Minimum 170 rpm
Airspeed Limits:	Vne (never exceed) 95 knots (See Note 2 for required placard)
Other Limits:	T.O. AN 01-230HJA-1 for HRS-3 or T.O. 1H-19(H)B-1 for H-19B/ -19D/-19G and Orlando Helicopter Airways FAA approved Flight Manual Supplement dated April 8, 1966.

The helicopters approved under this type certificate are done so under the concept of limited exposure associated with escape from inadvertent ice encounters, and are prohibited against flight into known icing. The helicopters must be re-evaluated if certification to the General Ice protection Airworthiness Regulations is requested.

Center of Gravity (C.G.) Range:	(125.0) to (136.0)
Empty Weight (C.G.) Range:	Refer to Operators Manual USAF Model HRS-1/CH-19, H-19A, YH-19A, UH-19C Helicopters.
Datum:	130.6 in. forward of center of main rotor hub.
Leveling Means:	Plumb line from top of cabin doorframe to index plate on cabin floor. (See Note 1.)
Maximum Weight:	7900 lbs.
Minimum Crew:	1 (Pilot)
No of Seats:	See Note 11
Fuel Capacity:	100 gallons forward tank, 72 gallons rear tank.
Oil Capacity:	9.4 gallons
Rotor Blade and Control Movement:	For rigging information, refer to Maintenance Manual USAF Model HRS-1/CH-19, H-19A, YH-19A, UH-19C Helicopters.
Serial No's. Approved:	Model HRS-3/H-19B, H-19D, H-19G, UH-19F, CH-19E, UH-19D helicopters that have been approved are identified in FAA approved Orlando Helicopter Airways, Inc., Eligible Serial Number Report # 01-3551, dated October 21, 2001 or later FAA approved revision. Current copy is available at the Atlanta Aircraft Certification Office, Atlanta, Georgia.

Data Pertinent to All Models:

Certification Basis: FAR 21.25(a)(2), effective February 1, 1965, including Amendments 21-1 through 21-71 for the special purpose of:

(1) Agriculture Operations under FAR 21.25(b)(1)

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for agricultural operations excepted by FAR 36.1(a)(4) and defined under FAR 137.3

(2) Forest and Wildlife Conservation Operations under FAR 21.25(b)(2).

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for dispensing fire fighting materials excepted by FAR 36.1(a)(4) and defined under FAR 137.3

(3) External Load Operations.

Note: In accordance with FAR 36.1(a)(4), compliance with the noise requirements was not shown. Therefore, aircraft certificated under this type certificate are only eligible for external load operations excepted by FAR 36.1(a)(4) and defined under FAR 133.1(a).

Any alteration to the helicopter for Special Purposes not identified above require further FAA approval and in addition, may require additional noise and/or flight testing.

General Note: Any subsequent modifications to the helicopters type certified under this Type Certificate are to have the certification basis for that modification established under 14CFR 21.101 published June 7, 2000 which became effective June 10, 2003. Otherwise non-significant modifications are to meet the requirements of CAR 6, Amendment 6-1 thru 6-5 dated December 20, 1956, normal category, and 14 CFR 27.1529, Instructions for continued airworthiness, Amendment 18, effective September 11, 1980.

Date of Application: April 5, 1966, Amended: April 8, 1966, January 23, 1967, November 3, 1970, October 17, 1978.

Production Basis: None. No helicopters may be produced under this approval. (See Note 4) Prior to adding serial numbers to this Type Certificate, each candidate helicopter must undergo a conformity inspection. The conformity inspection will be conducted in accordance with a Type Inspection Authorization, Part 1, or request for conformity that will include as a minimum, the inspections contained in the FAA Rotorcraft Directorate Restricted Category Conformity document dated September 25, 2001 or later FAA approved revisions.

Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in or on each helicopter for certification. In addition, equipment necessary for the particular special purpose must be installed.

NOTES

Note 1: A current weight and balance report including a list of equipment included in the certified empty weight, and loading instructions, when necessary, must be in each type helicopter at time of original airworthiness certification and at all times thereafter.

Note 2: The following placards must be prominently displayed in the cabin in clear view of the pilot:

Placard No. 1	THIS ROTORCRAFT MUST BE OPERATED IN ACCORDANCE WITH THE RESTRICTED CATEGORY OPERATING LIMITATIONS OF FAR 91.313.
Placard No. 2	AIRSPPEED LIMITS: NEVER EXCEED SPEED, V _{ne} 95 KIAS WHEN SPRAY BOOM INSTALLED, 50 KIAS EXTERNAL LOAD IN CARGO SLING, 40 KIAS.
Placard No. 3	AGRICULTURAL OPERATIONS MUST BE CONDUCTED IN ACCORDANCE WITH FAR PART 137.
Placard No. 4	INSTRUMENT FLIGHT PROHIBITED
Placard No. 5	See Note 14 below.
Placard No. 6	See Note 15 below.

Note 3: This model helicopter must be serviced, maintained, inspected, repaired and overhauled in accordance with the following technical manuals: AN 01-230HJA, AN 02A-10DD-2, T.O. 2R-R1300-12, AN 01-230HGA-4, AN 01-230HG-3 and T.O. 1H-19(H)A-3.

- Note 4: In addition to the standard helicopter requirements, the following additional data and/or helicopter configuration requirements must be met for each individual HRS-1/CH-19, H-19D, H-19A, H-19G, YH-19A, UH-19F, UH-19C, CH-19E, HRS-3/H-19B and UH-19D helicopter upon application for an original Special Airworthiness Certificate:
- (a) A completed Application for Airworthiness Certificate, FAA Form 8130-6 that has correctly identified the type certificate holder's helicopter and its intended special purpose(s).
 - (b) Written confirmation from the certifying office that the affected serial number has been added to Orlando Helicopter Airways type certificate.
 - (c) The application for airworthiness certification and the helicopter's registration certification must match the information on Orlando Helicopter Airways data plate.
 - (d) The Helicopter Flight Manual and documents specified in Note 3 are with the helicopter.
 - (e) The conditions and limitations specified in Orlando Helicopter Airways Type Certificate Data Sheet HR1SO dated August 6, 2003 or later FAA approved revisions are met.
 - (f) Modifications in accordance with Orlando Helicopter Airways Report OHA-1A, OHA-1B or other FAA approved special purpose modification.
 - (g) The provisions of AD 54-1-3, AD 54-13-1, AD 54-16-1, AD 54-19-2, AD 54-20-2, AD 55-25-4, AD 56-16-3, AD 56-23-3, AD 60-13-4 and AD 63-5-2 (AD 63-5-2 extended service life to 1200 hours when operating over sparsely populated areas), AD 65-8-2, AD 66-4-3 (AD 66-4-3 extended service life to 3500 hours when operating over sparsely populated areas), and AD 67-17-6.
 - (h) The provisions of USAF T.O. 1H-19-532, 1H-19-543 and 1H-19-556.
- Note 5: This helicopter is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the helicopter owners/operator's business, which is other than air transportation.
- Note 6: A restricted category helicopter may not be operated in a foreign country without the express written approval of that country.
- Note 7: This helicopter has not been shown to meet the requirements of the applicable comprehensive and detailed Airworthiness Code as provided by Annex 8, to the Convention of the International Civil Aviation Organization.
- Note 8: Military to Civil or Military to Military engine changes are allowed, provided the replacement engine is of the same make and model as identified in this TCDS. The military or civil replacement engine must have proper military or civil records and have the applicable FAA Airworthiness Inspection accomplished and is in an airworthy condition.
- Note 9: The Airworthiness Directives (AD) for the helicopter and engine contained in Orlando Helicopter Airways, Airworthiness Directive Report must be complied with prior to original certification. Provisions of applicable AD's shall apply to each model. (See Note 4 above for list of applicable AD's and Military Technical Orders.)
- Note 10: Alternate and emergency fuels are listed in the applicable Operators Manual for each applicable Model Helicopter. Some limitations apply for the use of certain alternative fuels. These limitations are listed in this section.
- Note 11: No person may be carried in this helicopter during flight unless that person is essential to the purpose of the flight.

- Note 12: Any Alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. If so, these instructions must be submitted and accepted by the FAA Fort Worth Evaluation Group (FTW-AEG), prior to approval for return to service.
- Note 13: Component overhaul intervals and replacement time shall be in accordance with Sikorsky Aircraft Engineering recommended and customer approved component overhaul intervals and replacement times. Part I (8 pages), Part II (4 pages), Part III (5 pages) and Part IV (5pages), dated 1 December 1956, unless superseded by appropriate Airworthiness Directive.
- Note 14: Reference Note 4, item (g) AD 63-5-2. Placard required on instrument panel in front of pilot:
- “WHEN OPERATING WITH S14-10-2000 ROTOR BLADES INSTALLED IN EXCESS OF 1000 HRS. OPERATIONS AUTHORIZED OVER SPARSELY POPULATED AREAS ONLY. NO OPERATIONS AUTHORIZED BEYOND 1200 HRS. BLADE TIME.”
- Note 15: Reference Note 4, item (g) AD 66-4-3. Placard required on instrument panel in front of pilot:
- “WHEN OPERATING WITH S14-10-2100 ROTOR BLADES INSTALLED IN EXCESS OF 2250 HRS. OPERATIONS AUTHORIZED OVER SPARSELY POPULATED AREAS ONLY. NO OPERATIONS AUTHORIZED BEYOND 3500 HRS. BLADE TIME.”

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